QoS SCHEDULER AND METHOD FOR IMPLEMENTING QUALITY OF SERVICE WITH CACHED STATUS ARRAY

Abstract of the Disclosure

A QoS scheduler, scheduling method, and computer program product are provided for implementing Quality-of-Service (QoS) scheduling with a cached status array. A plurality of calendars are provided for scheduling the flows. An active flow indicator is stored for each calendar entry in a calendar status array (CSA). A cache copy subset of the active flow indicators from the calendar status array (CSA) is stored in a cache. The calendar status array (CSA) is updated based upon a predefined calendar range and resolution. The cache copy subset of the active flow indicators from the calendar status array (CSA) is used to determine a given calendar for servicing. The subset of the active flow indicators from the calendar status array (CSA) is used to increment a current pointer (CP) by an identified number of positions up to a current time (CT) value, where the identified number of positions is equal to a variable number of inactive flow indicators up to the current time (CT) value and the identified number of positions has a maximum value equal to a number of entries in the cache.